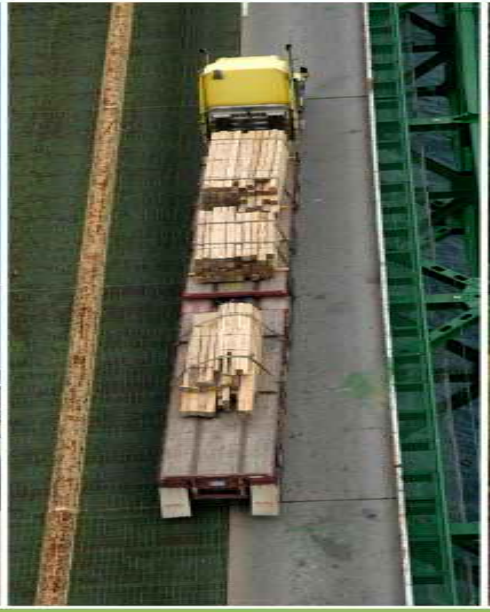
Commission for Logistics & Supply Chain Collaboration
Port Advisory Committee

August 12, 2021






MDOT
Michigan Department of Transportation

Agenda

- Welcome & Introductions
- Approval of Previous Meeting Minutes
- MM2045 Update
- LSC Update
- PAC Update
- Open Discussion
- Public Comment
- Wrap Up

Michigan Department of Transportation
Michigan 2045 Mobility
A transportation plan for a connected future #MM2045

Draft State Long-Range Transportation Plan

LSC/Port Advisory Committee Meeting
August 12, 2021

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MDOT

Agenda

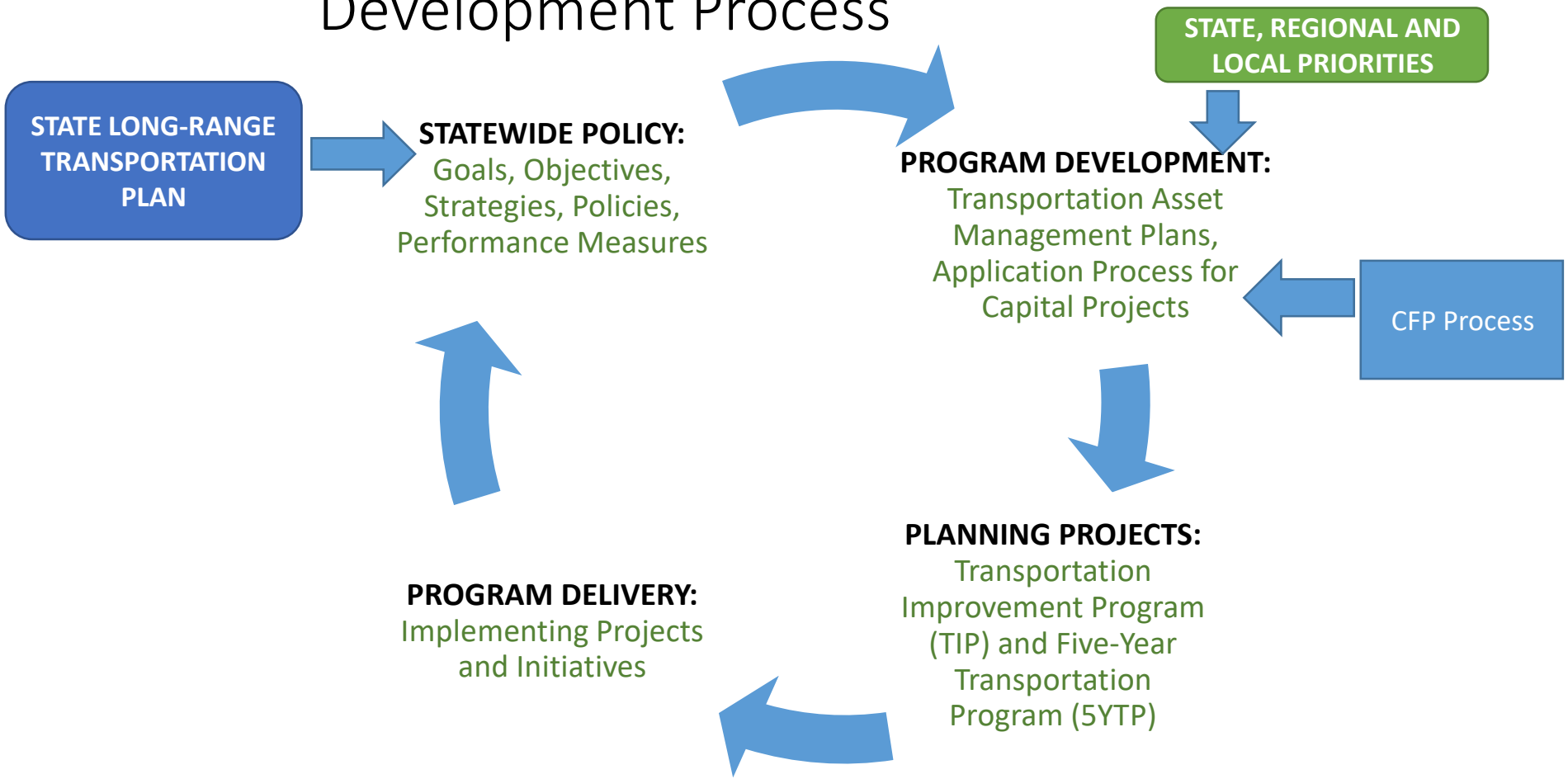
#MM2045

- MM2045 Approach and Schedule
- Public/Stakeholder Outreach
- What is MM2045?
- Draft Plan Content and Key Takeaways
- Q&A and Next Steps

What is a State Long-Range Transportation Plan (SLRTP)?

- Multi-modal policy-based planning document that establishes the following for Michigan's transportation system:
  - Vision (Adopted July 2019)
  - Goals (Adopted November 2019)
  - Objectives (Adopted June 2020)
  - Key Strategies (Adopted April 2021)
- Federally required
- 20+ Year Planning Horizon
- Updated every 5 years

Planning and Program Development Process



Public/Stakeholder Outreach

Surveys (14,000 responses)

- Telephone Town Halls (6,300+)
- MetroQuest Surveys (7,500+)
- Attitudes & Perception Survey (1,500)
- Service Needs of those With Disabilities Survey (200+)

In-Person Meetings (pre-COVID)

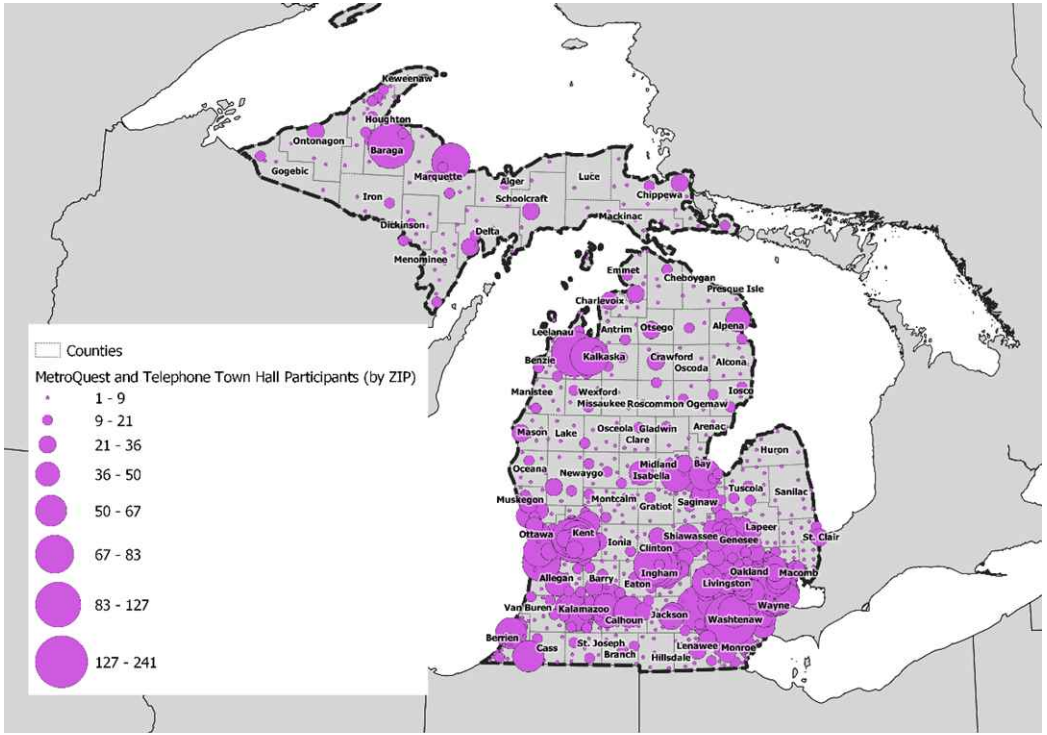
Online Meetings (1,200+ attendees)

- Freight, rail, transit, other stakeholder meetings (1-on-1 interviews)

Michigan Mobility website (29,000+ hits)

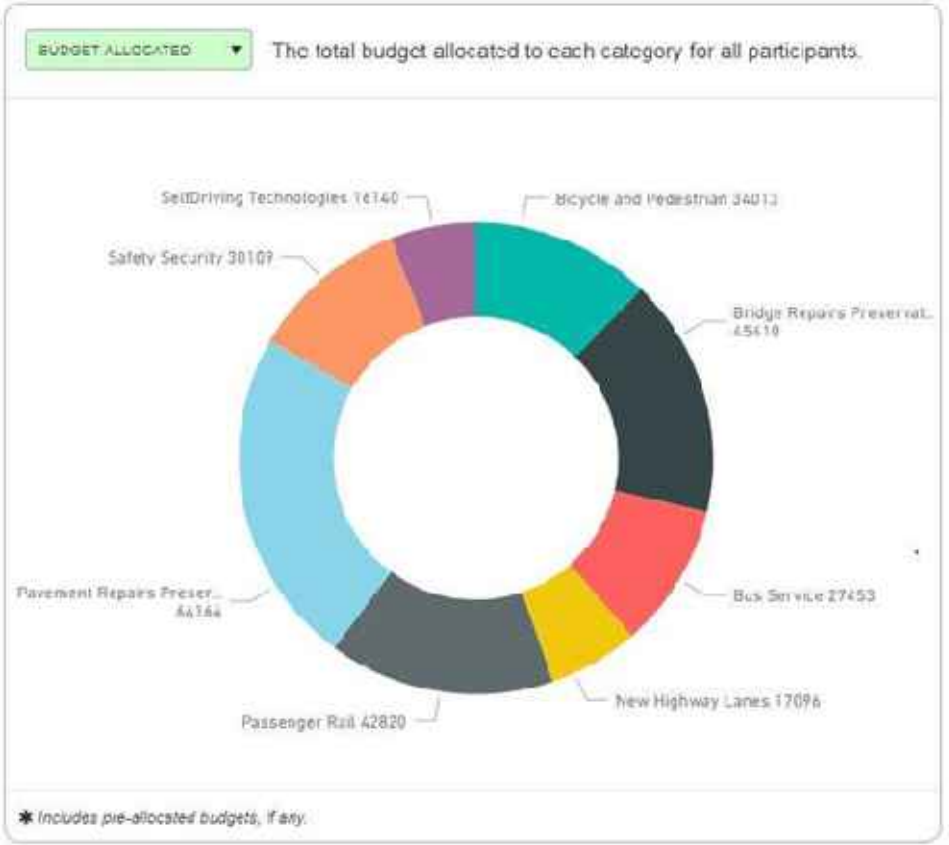
- www.michiganmobility.org

MDOT social media (400,000+ impressions)



MetroQuest Results – Budget Allocation

Investing In Transportation		
	Points	Percent
Pavement Repairs and Preservation	64,164	23%
Bridge Repairs and Preservation	45,410	16%
Passenger Rail	42,820	15%
Bicycle and Pedestrian	34,013	12%
Safety and Security	30,109	11%
Bus Service	27,453	10%
New Highway Lanes	17,096	6%
Self-Driving Technologies	16,140	6%
Total	277,205	100%



MM2045 Key Stakeholder Group

Outside Agencies

- Advocacy Groups
  - Bicycle
  - Construction Industry
  - Environmental
  - Fitness/Health
  - Freight
  - Municipal
  - Passenger Rail
  - Planning
  - Transit
- Federal Agencies
- Governor's Office
- Metropolitan Planning Organizations
- Other State Agencies
- Regional Planning Agencies
- Universities

MDOT

- Aeronautics
- Bridge
- Design
- Development
- Economic Development
- Enterprise Information Management
- Environmental
- Field Services
- ITS
- Passenger Transportation
- Planning
- Rail
- Regions
- Transportation Systems Management & Operations

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Letter from MDOT Director

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Shaping the Future

Chapter 4 — Vision, Guiding Principles, Goals and Objectives

Chapter 5 — Partnerships

Chapter 6 — Mobility and Accessibility

Chapter 7 — Community, Environment and Health

Network and System Performance

Chapter 8 — Multimodal Network Performance

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Chapter 10 — Network Capacity/Right-Sizing

Chapter 11 — Transportation Safety and Security

Chapter 12 — Network Management & Operations

Chapter 13 — Network Accessibility and Connectivity

Chapter 14 — Network Resiliency

Recommended Strategies

Chapter 1 – What is MM2045?

First of its kind integrated long-range transportation plan <u>for all of Michigan</u>

Chapter 1 – What is MM2045?

First steps towards long-range planning for certain modes on the statewide level (transit, active transportation)

Recognizes that all modes are not in the same place and more work needs to be done in the coming years to better understand needs

One Plan – Moving in the Same Direction

Chapter 1 – What is MM2045?

- **Provides a foundation for developing Michigan's transportation programs**
  - MDOT's 5YTP
  - S/TIP
- **Presents the social and economic cases for transportation investment in Michigan**
- **Michigan's social and economic prosperity depends on transportation investments**
- **Engagement and Input: Diversity, Equity and Inclusion**

How Does MM2045 Help Michigan?

- Organizes the efforts of MDOT and its partners around a common vision and goals shaped by public needs to move the state forward as technology and needs change over time
- Fosters partnerships across the hundreds of public, non-profit, and private owners and operators of Michigan's transportation system necessary to get the job done
- Demonstrates how we will get there so that the public can understand decision-making and hold us accountable to our commitments
- Explains how additional revenue will grow Michigan's economy, advance equity, adapt to climate change, and improve health and quality of life today and into the future
- Educates the public and decision-makers about coming changes in transportation and their effects

Chapter 1 – What is MM2045?

Infrastructure Included in MM2045

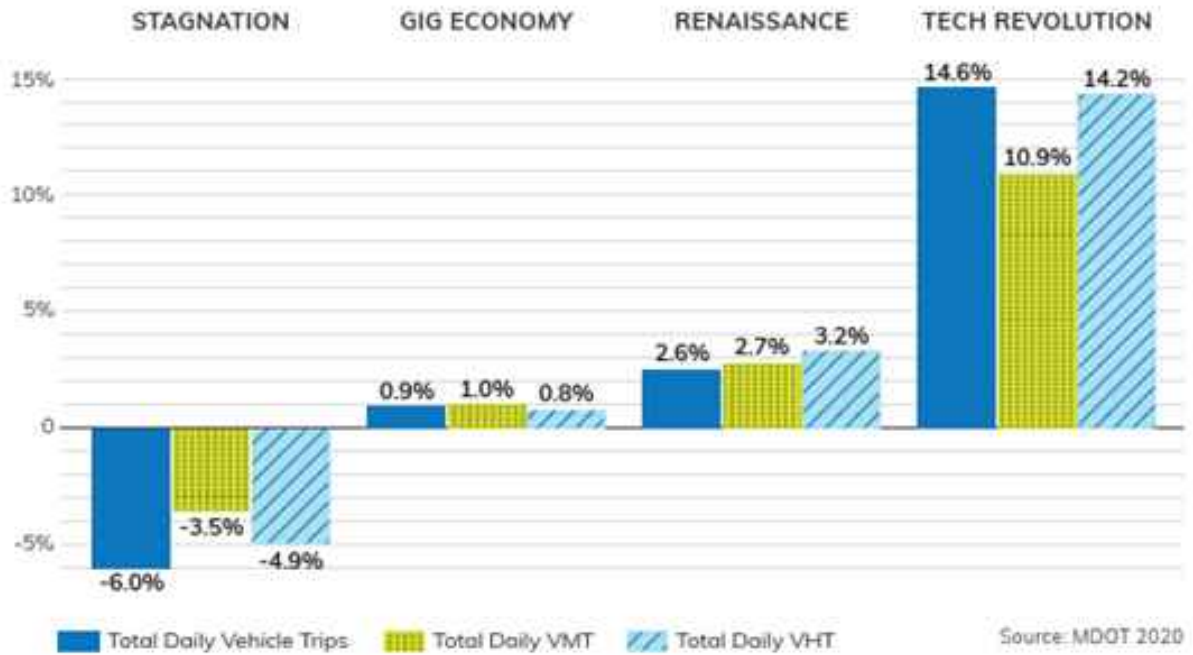
- Roads – All Federal-Aid Roads
  - Trunkline - 34,960 lane miles
  - Nontrunkline – 92,950 lane miles
- Bridges – All Bridges over 20 feet (over 11,000 bridges)
- Transit – local and intercity bus
- Rail – 3,600 miles of rail corridors, 665 miles are state-owned
- Aviation – All airports
  - 18 commercial airports
  - 219 licensed, public-use airports
- Ports – over 30 ports
- Active Transportation – U.S. Bicycle Routes, other trails and facilities

Chapter 2 – Trends, Forecasts, and Scenarios

Recognizes key trends including:

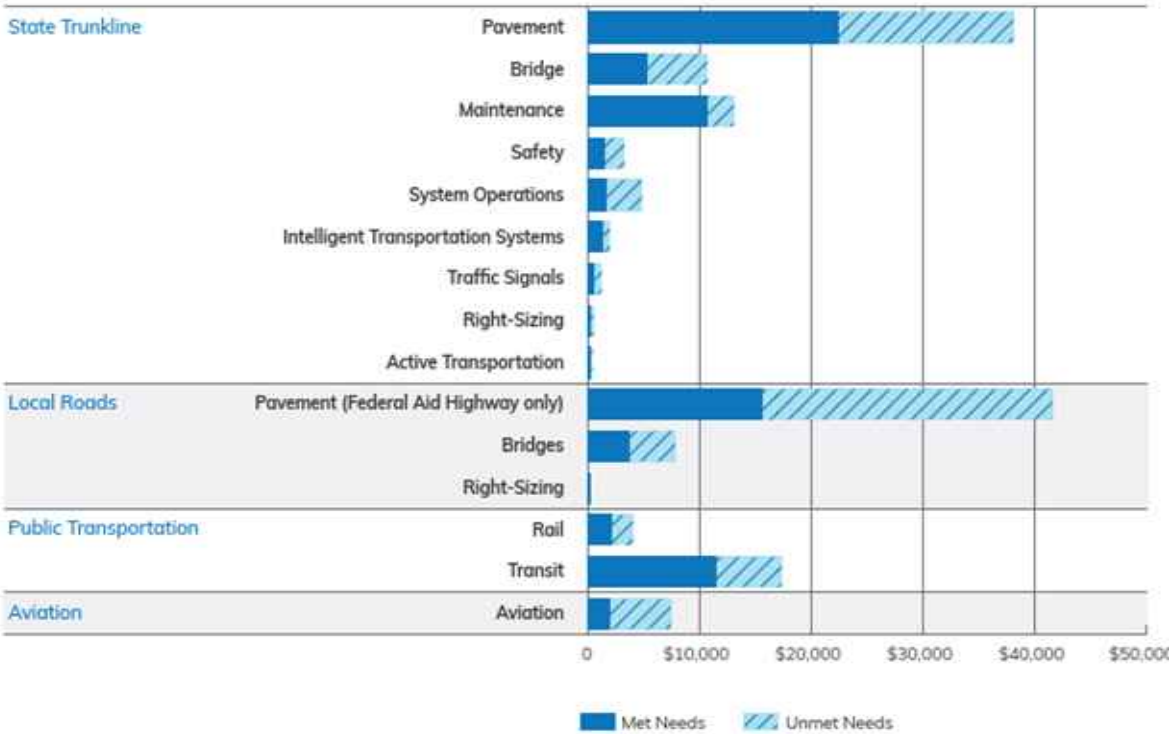
- Impact of changes in population and employment patterns (urbanization)
- Aging population
- Freight supply chain diversification and e-commerce
- CAVs + Electrification
- Impact of COVID-19

Includes findings from Scenario Analysis



Chapter 3 – Revenues

- **Presents sources of funding** (state and federal)
- **Quantifies met needs and unmet needs over the next 25 years** for certain aspects of the transportation system
  - missing some local $$ needs, transit, active transportation
  - only meeting about 50% of needs
- **Identifies strategies to close the revenue gap**



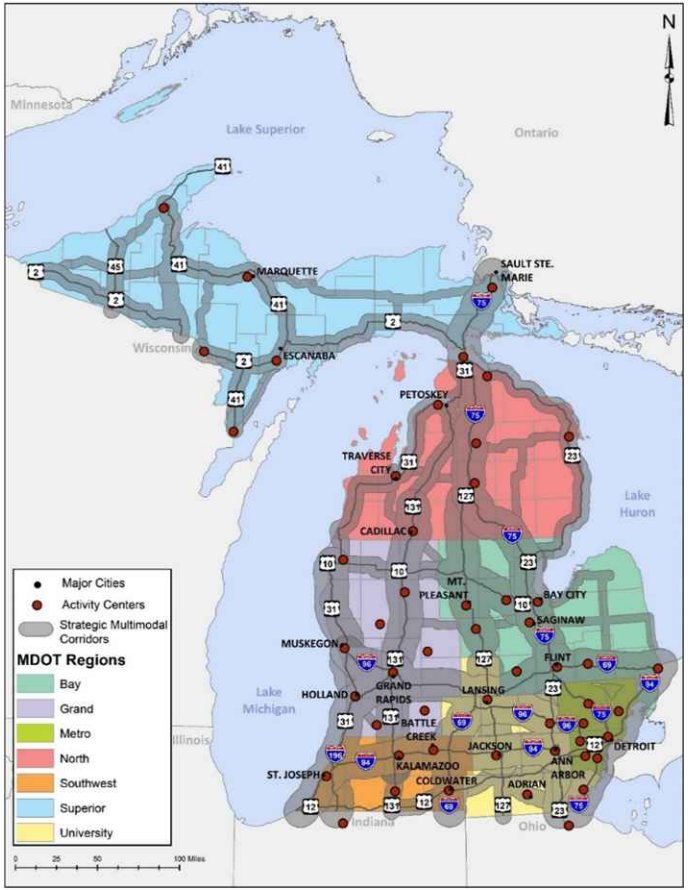
Chapters 4-8: Shaping the Future and Performance

Shaping the Future

- Chapter 4: Vision, Guiding Principles, Goals and Objectives
- Chapter 5: Partnerships
- Chapter 6: Mobility and Accessibility
- Chapter 7: Community, Environment and Health

Network and System Performance

- Strategic Multimodal Corridors Report
- System Performance Report



Chapter 4 – Vision, Principles, Goals, Objectives

- **Presents MM2045 Vision** and the principles, goals, and objectives that support its realization as previously approved by leadership
- **Demonstrates linkages between National Freight Goals and MM2045** to fulfill FHWA requirements

Guiding Principles

Preservation	Modal Choice	Future Oriented	Sustainable Communities




Michigan Mobility 2045 Vision

*“In 2045, Michigan’s mobility network is **safe**, **efficient**, **future-driven**, and **adaptable**. This interconnected **multimodal** system is **people-focused**, **equitable**, **reliable**, **convenient** for all users and enriches Michigan’s **economic and societal vitality**.*

*Through **collaboration and innovation**, Michigan will deliver a **well-maintained and sustainably-funded** network where strategic investments are made in **mobility options** that **improve quality of life**, **support public health**, and **promote resiliency**.”*

Chapter 4 – Vision, Principles, Goals, Objectives

Chapter 4

Vision, Guiding Principles, Goals and Objectives

Vision

In 2045, Michigan's mobility network is safe, efficient, future-driven, and adaptable. This interconnected multimodal system is people focused, equitable, reliable, convenient for all users and enriches Michigan's economic and societal vitality.

Through collaboration and innovation, Michigan will deliver a well-maintained and sustainably-funded network where strategic investments are made in mobility options that improve quality of life, support public health, and promote resiliency.

Guiding Principles

Preservation

Preserve, operate, enhance and right-size the existing multimodal network as efficiently and effectively as possible, build and manage it to withstand and recover rapidly from disruptions, and maintain a network that provides for predictable access, movement, and interconnectivity.

Modal Choice

Build, maintain, and operate a multimodal mobility network for all users that is safe, adapts to new demographic, economic, and technological conditions, equitably distributes costs and benefits, responds to the public's demand for more modal choices and strengthens economic opportunity with high-quality access to jobs, to commerce, and between economic centers in and out of Michigan.

Future Oriented

Protect mobility investments by pursuing and planning for emerging trends, embracing technology, seeking flexible and diversified funding and financing tools to strengthen cross-jurisdiction and multidisciplinary partnerships, and pursue innovation in every aspect of transportation.

Sustainable Communities

Foster livable, healthy, and connected communities with convenient, multimodal access to jobs, services, social support, and activities by facilitating the safe and convenient movement of all people regardless of age, income, or ability, providing strong intermodal connections, and engaging in health-promoting projects and policies that support clean air and clean water.

Chapter 4 – Vision, Principles, Goals, Objectives

Goals and Objectives

Quality of Life: *Enhance quality of life for all communities and users of the transportation network.*

- Create opportunities for safe physical activity, equitable transportation choice, and community engagement
- Plan, develop, and maintain transportation facilities in a manner that protects the natural, historic, and cultural environment and avoids or minimizes adverse impacts
- Pursue community supportive transportation outcomes
- Strive for cleaner, more efficient and sustainable energy sources for transportation operations and facilities

Mobility: *Enhance mobility choices for all users of the transportation network through efficient and effective operations and reliable multimodal opportunities.*

- Improve access and connectivity between modes
- Provide accessible and equitable modal options for the movement of people
- Mitigate travel delays and alleviate congestion to provide predictable, reliable travel times
- Leverage technology, communications, and management strategies to maximize safety and operational efficiency of existing systems
- Identify redundancy gaps in the network to ensure continued mobility in the event of disaster or other interruption

Safety and Security: *Enhance the safety and ensure the security of the transportation network for all users and workers.*

- Reduce the number of lives lost and injuries sustained on Michigan's transportation network, striving for zero
- Foster a community and workplace culture of safety first
- Reduce vulnerability from various threats; protect physical assets, cyber assets, and transportation systems
- Prepare for and implement efficient coordinated response and recovery to emergency and disaster events

Network Condition: *Through investment strategies and innovation, preserve and improve the condition of Michigan's transportation network so that all modes are reliable, resilient, and adaptable.*

- Achieve and maintain a state of good repair of transportation assets within the limitations of available resources
- Cost-effectively maintain, operate and upgrade assets to maximize the useful life
- Incorporate resiliency, adaptability, and redundancy in the transportation network, systems management, and operations

Economy and Stewardship: *Improve the movement of people and goods to attract and sustain diverse economic opportunities while investing resources responsibly.*

- Pursue transportation asset and operational improvements that will expand access to economic opportunities, jobs, and core services
- Improve transportation connectivity to established and emerging activity centers and tourist destinations
- Create and enlarge competitive advantage for Michigan supply chains through higher productivity and dependability in the state freight system, supporting economic growth and strengthening economic resilience
- Coordinate transportation systems with land use for efficient and sustainable use of resources

Partnership: *Strengthen, expand and promote collaboration with all users through effective public and private partnerships.*

- Ensure key transportation data is collected, maintained, usable, and accessible to transportation partners and the public
- Use performance measurement to inform decision-making and show progress toward local, regional, state, and national goals
- Strengthen collaborative partnerships between public and private sectors and leverage diverse investment opportunities
- Strengthen coordination of transportation facilities and services between agencies and municipalities.
- Strengthen community engagement and open decision-making processes offered through a combination of inclusive traditional and innovative methods

Chapter 5 – Partnerships

- **Summarizes Engagement** (supported by Public Engagement Summary appendix)
- **Emphasizes that statewide networks require coordination between multiple levels of government, private sector**
- **Illustrates importance of partnerships across all modes, examples**

Rail

KEY ORGANIZATIONS - Surface Transportation Board; National Transportation Safety Board (NTSB); Federal Railroad Administration (FRA); FHWA; private companies; MDOT

OWNERSHIP - Most of Michigan's 3,600 miles of rail corridors are privately owned, operated, and maintained by freight railroads. The system also supports passenger rail service.

SAFETY - Railroads are responsible for the safety of their operations and rail lines. FRA oversees track, bridges, and any incidents. MDOT has regulatory authority for all grade crossings and manages safety programs, as well as oversees rail worker safety. FRA and FHWA oversee safety programs. FTA and MDOT oversee state safety oversight for fixed-guideway systems.

PLANNING - Railroads conduct their own planning efforts for their property and operations. MDOT is responsible for the State Rail Plan. Other rail studies may be conducted by other parties for specific projects and/or new services. The U.S. Passenger Rail Investment and Improvement Act provides a framework.

FUNDING – Freight railroads fund most freight-related capital and maintenance investments. State appropriations fund intercity passenger rail operations, state-owned lines, and rail-related economic development projects. Grade crossing improvements are funded with dedicated state and federal dollars. FHWA and FRA oversee programs that can fund rail projects. MDOT provides funds to support safety, economic development, state-owned track, and passenger service. FRA oversees grant and funding programs.

INVESTMENT PRIORITIZATION - Railroads determine priorities for their network. MDOT's 5YTP defines its investment strategy for state-owned rail corridors. MDOT also has an FHWA-approved prioritization process for investments at grade crossings and initial prioritization for enhancements to road crossings.

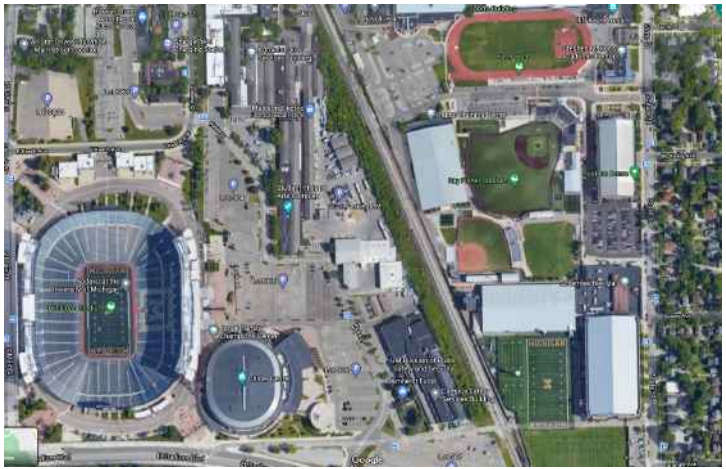
Network and System Needs Chapters

- **Chapter 9 – Network and System Preservation**
- **Chapter 10 – Capacity/Right-sizing**
- **Chapter 11 – Transportation Safety and Security**
- **Chapter 12 – Network Management and Operations**
- **Chapter 13 – Network Accessibility and Connectivity**
- **Chapter 14 – Network Resiliency**

Rail Needs – Minimize Conflicts

Blocked Crossings

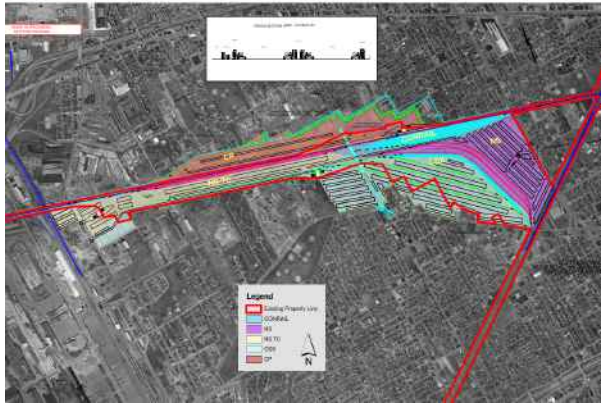
Land Use Conflicts



Separate Freight and Passenger Rail

Rail Opportunities

Intermodal Improvements



Transload Improvements

Direct Access

Recommended Strategies

- Vision - Guiding Principles - Goals and Objectives - together form the Strategic Direction
- Input from stakeholders, MDOT subject matter experts, and the public
- First time for statewide strategies for active transportation and transit
- Policy-oriented strategies, then Freight and Rail Service Investment Plans

STRATEGY CATEGORIES

1. ***Prioritizing Safety***
2. ***Managing Resources Responsibly***
3. ***Providing Accessibility and Mobility for All***
4. ***Supporting Michigan's Health***
5. ***Building Resilience***
6. ***Working Together***
7. ***Technology***
8. ***Economic Vitality***

Recommended Strategies

Relationship of Strategies to Goals

MM2045 Implementation Strategies	Safety and Security Enhance the safety and ensure the security of the transportation network for all users and workers	Network Condition Through investment strategies and innovation, preserve and improve the condition of Michigan's transportation network so that all modes are reliable, resilient and adaptable	Mobility Enhance mobility choices for all users of the transportation network through efficient and effective operations and reliable multimodal opportunities	Quality of Life Enhance quality of life for all communities and users of the transportation network	Economic and Stewardship Improve the movement of people and goods to attract and sustain diverse economic opportunities while investing resources responsibly	Partnership Strengthen, expand and promote collaboration with all users through effective public and private partnerships
1. Prioritizing Safety	✓					✓
2. Managing Resources Responsibly		✓			✓	
3. Providing Accessibility and Mobility for All	✓	✓	✓	✓	✓	
4. Supporting Michigan's Health	✓	✓	✓	✓		✓
5. Building Resilience	✓	✓	✓	✓	✓	✓
6. Working Together	✓	✓	✓		✓	✓
7. Technology	✓	✓	✓			
8. Economic Vitality		✓	✓		✓	✓

Performance-Based Planning and Programming

MDOT's System Performance Report assesses progress towards achieving targets

- **Percentage of Michigan, MDOT trunkline, and local agency bridges in Good or Fair condition**
- **Percentage of federal-aid road pavement in good or fair condition**
- **Percentage of Tier 1 airport pavement in good or fair condition**
- **Number of Tier 1 airports with all-weather access**

Public Comment Period – July 23 – August 31, 2021

- Website: www.michiganmobility.org
  - Comment Box available
- Draft Plan Document
- Plan Appendices
  - Rail Supplement
  - Public/Stakeholder Outreach Report
  - System Performance Report
  - Strategic Multimodal Corridors Report
  - Active Transportation Plan – Executive Summary
- Videos

Next Steps

- July 22 – STC Presentation of Draft Plan
- **July 23 – August 31 – Public Comment Period**
- September 1-18 – Update of Plan for final review
- Week of September 27 – Leadership Presentation of Draft Plan
- October 21 –STC Adoption of Final Plan

Freight and Rail Elements in MM2045

Linkage of MM2045 Goals with National Freight Goals

National Freight Goals

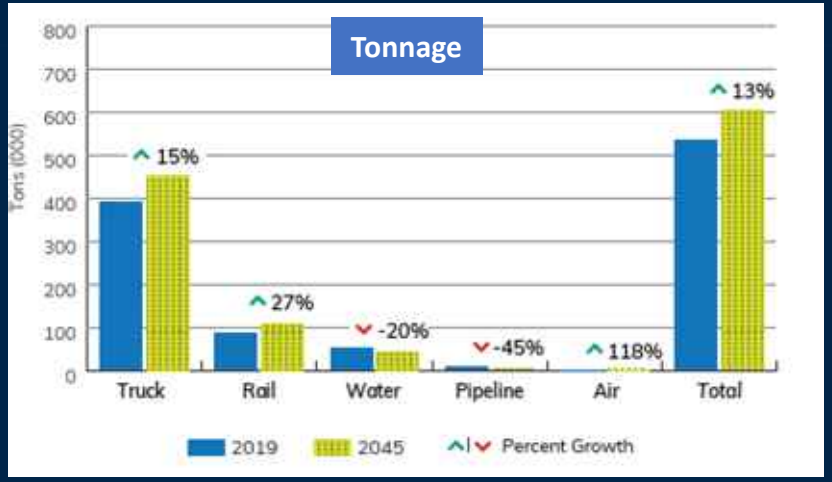
- **Enhancing economic efficiency, productivity, and competitiveness**
- **Reduction of congestion and bottlenecks and improvement of reliability**
- **Achieving and maintaining a state of good repair**
- **Reduction of environmental and community impacts**
- **Improving the movement of goods across and between rural areas and population center, gateways and border**

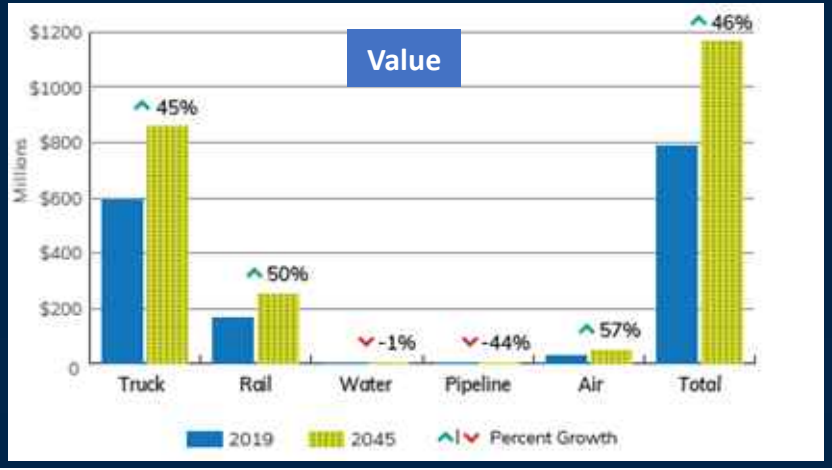
National Freight Goals	MM2045 Goals					
	Quality of Life	Mobility	Safety and Security	Economy and Steward-ship	Network Condition	Partnership
Enhance economic efficiency, productivity, and competitiveness	✓	✓	✓	✓	✓	✓
Reduce congestion and bottlenecks and improve the reliability of freight transportation	✓	✓	✓	✓	✓	
Improve safety, security, and resiliency	✓	✓	✓	✓	✓	✓
Achieve and maintain state of good repair			✓	✓		✓
Use advanced technology to improve the safety, efficiency, productivity, and reliability of the network	✓	✓	✓	✓		✓
Reduce environmental and community impacts	✓		✓	✓	✓	✓
Improve the short- and long-distance movement of goods across and between rural areas and population centers, gateways, and borders		✓	✓	✓	✓	✓

Growth in Tons and Value: Truck, Rail, Water, Air and Pipeline 2019-2045

Freight Volumes will grow on Michigan's roads

- Total tonnage on all modes expected to grow by 13% through 2045
- Total value expected to grow by 46%
- Pass-through traffic is major driver of growth: 73% of tons added
- Trucking will remain dominant handling about 75% of freight
- Rail will grow faster than trucking rising 27% by tonnage and 50% by value





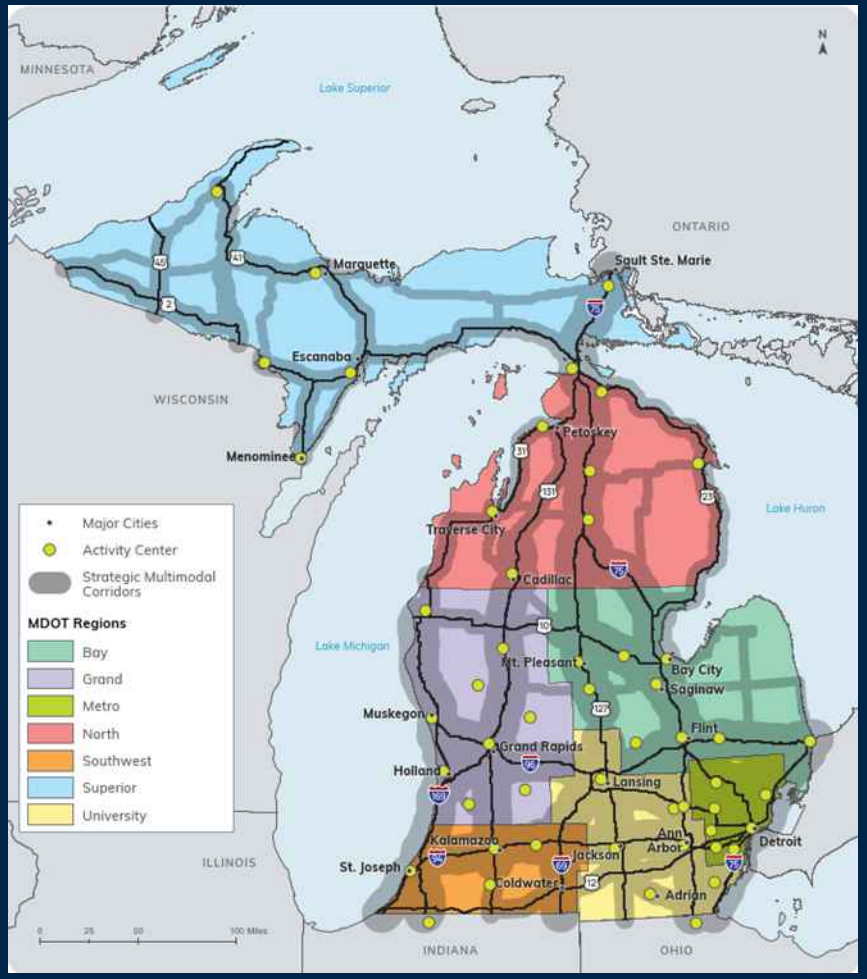
Supply Chains are changing and so will freight transportation routes.

Funding the freight system is essential to retaining and attracting manufacturing

- Industries are rethinking supply chains to:
  - Mitigate risk
  - Take advantage of new product and process technologies
  - Respond to consumers
- Overseas, regional, and local goods will rely on a wider array of trucking and rail routes, possibly with new intermodal terminals.
- Online shopping and same-day delivery becoming common
  - Retail moves to close-in distribution
- Real-time information needed to reduce risks and enable cost reductions
- Collaborative Optimization gives public-private partnerships new meaning

Strategic Multimodal Corridors

- Represent an integrated multimodal system
  - Vital to the economy
  - Carry vast majority of miles traveled
  - *Portfolio* of modes a key MM2045 theme
- Represent Michigan's core highway freight network
  - Critical truck routes, essential goods network
- Includes less-traveled highways to key destinations in rural areas
  - Important for market access
  - Role in alternate routing during emergency



Marine

The Great Lakes Marine Transportation System includes 33 active cargo ports and 112 cargo terminals in Michigan

- Handle 51.7 million tons of cargo valued at $4.1 billion annually
- Critical part of the overall freight transportation system
- Contributes to the modal diversity that is one of the state's competitive advantages

- In Sault Ste. Marie, the Poe Lock is nearly 50 years old
- Congress has authorized:
  - Building a new lock for redundancy and replacement of closed locks
  - Dredging and icebreaking
- Follow-through is needed to avoid economic impacts.

Performance Measures for Freight and Rail

- Annual number of crashes on Michigan public roadways involving a commercial truck
- Percentage of federal-aid roadway system with reliable travel times
- Percentage of trunkline railroad crossings in good or fair condition

- Truck-delay cost of urban freight bottlenecks
- Truck-delay cost of rural freight bottlenecks
- Number of freight bottlenecks delaying truck access to major airports, water ports, and intermodal container facilities

Freight Safety and Security

- 27 segments experienced 10 or more crashes in 2019, all in southern MI
- Factors include:
  - Snow and ice
  - Roundabout with heavy mixed vehicle traffic
  - High volume work zone corridors
  - Congested corridors with truck bottlenecks and accessibility issues

Needs include:

- Queue warning/management system
- Roundabout upgrades
- Financing for retrofitting older fleet vehicles with new safety technologies
- Cable median barriers
- Continued safety improvements to highway/rail grade crossings

Network Management and Operations

Trucks account for 73% of all tonnage and the number of trucks is projected to grow by 15%

- System management and operational investment must be implemented
- Shippers use data from ITS devices to optimize their routes
- The industry needs more ITS devices
- Expand collaboration with private sector and local governments to optimize freight movement
- Continue focus on work zone detours and deteriorating bridges to avoid costly detours

Needs include:

- Truck driver attraction and retention
- Pavement lane markings
- Wayfinding
- Alternative routing in congested areas
- Weather advisory services

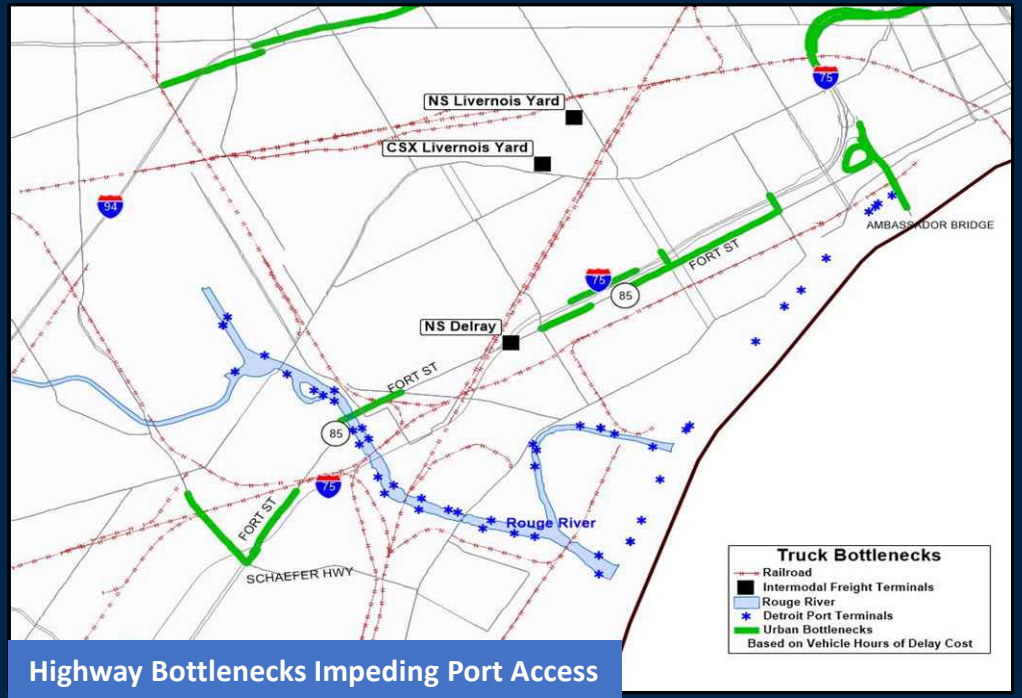
Network Accessibility and Connectivity

Providing a diverse portfolio of modes for freight movements

- Supply chain managers depend on real-time data to plan freight moves and respond to disruptions
- Off-highway, designated truck routes to key destinations covered by wireless networks and connected signals to send data to fleet managers
- Diversification and redundancy will require additional intermodal terminals and transload facilities

Needs include:

- First and last-mile improvements
- ITS and connected infrastructure
- Access bottleneck improvements at ports, airports, and pipelines.



Highway Bottlenecks Impeding Port Access

Marine Needs

Ports require planning and investment

- Regulatory impacts and lack of channel maintenance have dampened demand for ports
- Ports indicated that those issues and lack of funding have resulted in the loss of customer opportunities
- Other states, such as Wisconsin and Florida, have ongoing marine grant programs that support needed port improvements

- Michigan's state-level assistance programs are not as competitive as neighboring states according to detailed comparison
- Reliable funding sources, even if not large, would allow Michigan ports to plan for growth

Network Right-Sizing

Freight needs include new lanes, interchange reconfiguration, lane and shoulder widths, and port planning and investment

- Michigan's truck bottlenecks affect nearly 150 locations and represent approximately $4 million/day in user costs
- The majority lack scheduled-capacity or operational improvements in MDOTs 5YTP

Priority should be given to top bottlenecks

- Rural bottlenecks with user costs more than $30,000/day
- Urban bottlenecks with costs greater than $50,000/day
- Of these, all 5 rural and 4 of 18 urban lack projects in the 5YTP

Recommended Strategies

How MM2045 Advances National Freight Goals

➡Freight appears throughout the plan:

- Promoting freight service, infrastructure improvements and intermodal connectivity
- Reducing the number and severity of freight bottlenecks on strategic multimodal corridors
- Incorporating freight reliability and economic benefits as factors in project prioritization
- Improving the reliability of the transportation networks and systems
- Prioritizing infrastructure and facilities improvements with proven safety benefits
- Identifying and addressing risks to Michigan's transportation network
- Advancing transportation asset management to optimize transportation investments

Recommended Strategies

How MM2045 Advances National Freight Goals

- Supporting state of the art safety technology solutions, including adoption of ADAS and other safety technology in new and existing freight vehicles
- Promoting signal control and priority and incident management program
- Preparing for and enabling widespread CAV adoption
- Regularly evaluating new transportation technology to improve safety and performance
- Prioritizing interoperability and standardization when adopting new technology
- Contributing to initiatives to improve air quality and reduce emissions
- Supporting and implementing approaches that preserve Michigan's natural resources
- Expanding public sector partnerships and collaborations that apply to freight
- Improving and expanding relationships with private and nonprofit partners

Freight Investment Plan

For years 2022-2026 Michigan is anticipated to be eligible for $39.9 million annually in federal NHFP funds

- Total of $199.6 million over the five-year period
- Assumed continuance of the Fast Act
- Top performance issues based on truck user delay costs per day and the number of truck crashes were identified statewide
- Locations compared to projects in the current 5YTP
- Projects that address top performance issues were determined to merit NHFP funds
- Subset of 16 selected for inclusion in FIP, urban and rural

Other Freight-Related Investments and Needs

FIP does not reflect the full range of Michigan's investments in freight or the full scope of freight needs

- Michigan has more than $3 billion in other funding directed to projects that address highway performance issues related to truck delay cost and crashes
- Additional top urban and rural highway freight issues total at least $340-$380 million
- Road access to ports, airports, and rail facilities are reflected
- Investments in maintenance and development such as roadway striping and ITS technology incorporate the needs of freight users

- Numerous non-highway freight needs identified
- Non-highway modes eligible to receive up to 10% of total NHFP funding each year, but MDOT cannot do this yet
- Michigan is considering how to support a standing pool of funds for all non-highway needs - an effective approach in other states
- New federal programs, FAST Act reauthorization, next 5YTP (FY2027) are possibilities in the mix

Rail Components of MM2045 and Supplement Fulfill Federal Rail Plan Requirements

FRA PLAN CHAPTER	Requirement	MM2045 Chapter	State Rail Plan Supplement Section
1	Percentage of Freight Shipped by Rail over 500 Miles		Section 1
	Freight Rail Tonnage by Commodity/Direction		Section 3
	Total Freight Tonnage by Commodity/Direction	Chapter 2	
	Intercity Passenger Rail Mode Share		Section 4
	Commuter Rail Mode Share	Not Applicable	Not Applicable
	Passenger Rail Accesibility		Section 1
	Governance/Institutions		Section 2
2	STB Railroad Classification	Chapter 8	Section 3; Appendix B
	Signal Type		Appendix B
	Clearance and Weight Restrictions	Chapter 10	Section 3; Appendix B
	Route Miles: Track Classification		Section 3
	Rail Banked Lines		Section 3
	Passenger Rail Statistics		Section 4
	Passenger Rail Intermodal Facilities	Chapter 8	Section 4; Appendix A
	Freight Rail Intermodal Facilities	Chapter 13	Section 3; Appendix B
	Stracnet Rail Corridor	Chapter 11	Section 3
	Station Inventory and Connectivity	Chapter 15	Appendix A
	Passenger Rail Performance		Section 4
	Passenger Rail Riderhip		Section 4
	Passenger Rail Financials		Section 4
	Public Funding Sources	Chapter 15	Section 7
	Demographic Trends	Chapter 2	
	Economic Trends	Chapter 2	
Chapter 3	Rail Needs-Freight	Chapter 13	Section 5
Chapter 4	Rail Needs-Passenger	Chapter 13	Section 6
Chapter 5	Investment Benefits	Chapter 15	Section 7
	Rail Investments	Chapter 15	Section 7
Chapter 6	Puplic and Stakeholder Participation	MM2045 Public and Stakeholder Participation Report	

The Rail Service and Investment Program Consists of Short-Range and Long-Range Investment Programs

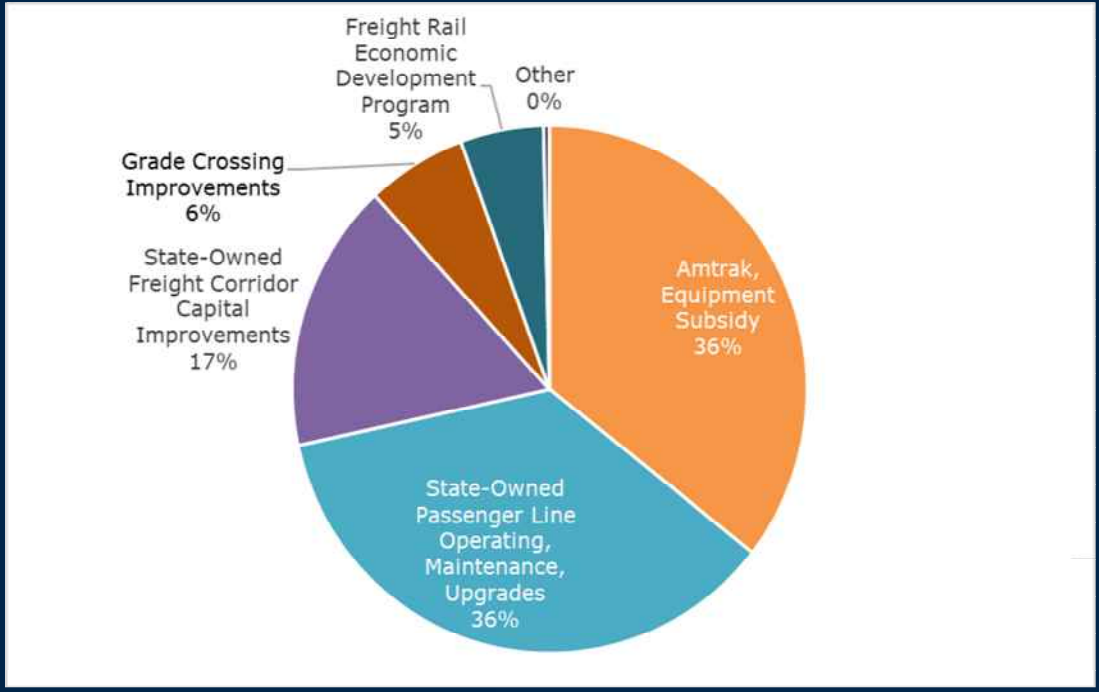
Short-Range

- Short-range investment program covers 2021 - 2025
- Based on MDOT Office of Rail Five-Year Strategic Plan

Long-Range

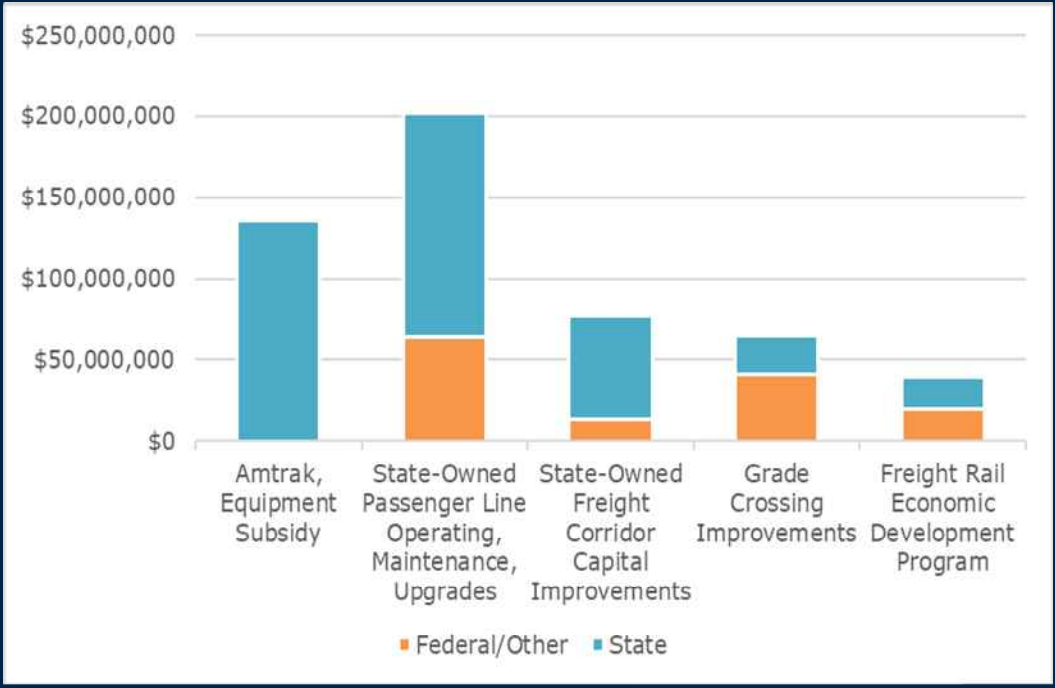
- Long-range investment program covers 2021 - 2045
- Consistent with other MM2045 modes
- Based on MDOT Office of Rail Five-Year Strategic Plan, but modified per assessment of bridge needs
- Also considers a fiscally unconstrained “wish list” of projects

The MDOT Office of Rail Five-Year Strategic Plan Serves as the Short-Range Investment Program



Forecasts $382 Million in State Funds between 2021 and 2025

The Extent of Forecast Non-State of Matching in the Five-Year Plan Depends on the Type of Expenditure/Investment



With Consistent Funding Levels, the Total over 25 Years Would Be $1.9 Billion

Item	Amount
Amtrak, Equipment Subsidy	$680,000,000
State-Owned Passenger Line Operating, Capital Maintenance, Upgrades	$688,000,000
State-Owned Freight Line Capital Improvements	$316,000,000
Grade-Crossing Improvements	$120,000,000
Freight Rail Economic Development Program	$100,000,000
Other	$7,000,000
Total	**$1,911,000,000**

The distribution of funds would differ given projected long-term bridge needs

In Addition, Stakeholders Recommended $2.75 Billion in Improvements

Item	Total
Passenger Rail Improvements	$1,529,300,000
Short-Line Railroad Projects	$306,000,000
Class I Railroad Recommended Projects	$66,800,000
Projects from Detroit Intermodal Freight Terminal First Five-Year Plan	$12,100,000
Longer-Term Detroit Intermodal Freight Terminal Projects	$392,100,000
Canadian Pacific Tunnel	$446,000,000
Total Upgrades	**$2,752,000,000**

Some would be eligible for existing MDOT programs, but most would not

Short Line Railroads Recommended a Range of Different Projects

Type of Project	Number of Projects	Cost of Projects
Bridge – Repair, improve or replace bridges	18	$33,889,500
Building – Improve building used for rail service	8	$2,250,000
Crossing – Resurface or other project relevant to highway/rail crossing	3	$475,000
Equipment – Purchase or renovate rail equipment or maintenance-of-way equipment	6	$26,729,000
Siding – Improve or establish rail siding	6	$18,360,000
Signal – Improve or upgrade rail signal system	2	$18,040,000
Track upgrade – Augment the standards of railroad track, replacing rail with better rail, increasing FRA track class, etc.	8	$99,300,000
Track Rehabilitation – Bring track to a state of good repair	11	$31,325,600
Track Relocation – Move train tracks to a different location	3	$37,100,000
Transload – Improve or establish truck/rail transload facility, improve or establish rail/marine facility	9	$11,398,000
Yard – Make improvements to a rail yard	6	$27,351,466
Total	**80**	**$306,218,566**

Projects on Class I Railroads Consist of NS Recommendations, DIFT Projects, CP Tunnel

Category	Project	Cost
Projects Recommended by Class I Railroads for MM2045	Pave Norfolk Southern Livernois Junction Yard	$13,800,000
	DRIC Connection (Conrail, Norfolk Southern)	$3,000,000
	Norfolk Southern Domestic Service	$50,000,000
	Total – Class I Recommended Projects	**$66,800,000**
Projects from the DIFT "First Five-Year Plan"	Canadian Pacific YD Interlocker (Canadian National, Conrail)	$4,100,000
	Design Civil Work Outside Terminal	$8,000,000
	Total – DIFT "First Five-Year Plan"	**$12,100,000**
DIFT "Projects to be Completed As Determined by DIFT Railroads" and Canadian Pacific Tunnel	Vinewood Interlocker (Canadian National, Conrail)	$2,300,000
	Oakwood Junction Interlocker (Norfolk Southern, Canadian National)	$5,300,000
	Schaefer Interlocker (Canadian National, Conrail)	$5,300,000
	Track from Oakwood to Schaefer (Canadian National)	$16,500,000
	New Rotunda Interlocker (Conrail)	$6,200,000
	Milwaukee Junction Interlocker	$17,500,000
	Beaubien Interlocker (Canadian National, Conrail, Amtrak)	$4,300,000
	Civil Work Outside Terminal	$82,400,000
	Civil Work Inside Terminal	$38,900,000
	Canadian Pacific Terminal	$64,100,000
	Mill Interlocker (Canadian National, Conrail)	$2,900,000
	Trenton Interlocker (Canadian National, Conrail)	$89,200,000
	CSX Terminal	$57,200,000
	Canadian Pacific Tunnel	$446,200,000
	Total	**$838,300,000**

Short-Range and Long-Range Freight Rail Investment Programs Support MM2045 Goals

- ✓Safety – Rail is a safe mode of transportation, projects support safety
- ✓Network Condition – Projects maintain/bring Michigan's rail network to a state of good repair
- ✓Mobility – Projects provide shippers with freight options
- ✓Quality of Life – Rail supports Michigan's communities
- ✓Economy and Stewardship – Projects connect Michigan businesses with U.S. and international markets
- ✓Partnership – Supports partnerships between public and private sectors

- LSC Update
- PAC Update

Open Discussion & Public Comment

Next LSC Meeting:

November 4, 2021